REMARKS

Claims 1-24 are pending in the present application. In the Office Action mailed January 11, 2005, the Examiner rejected claims 1 and 8-10 under 35 U.S.C. §102(b) as being anticipated by Tanaka (USP 4,995,069). The Examiner next rejected claims 1, 8-10, 18-19, and 21-24 under 35 U.S.C. §102(b) as being anticipated by Yamada et al. (USP 4,969,171). Claims 2-7 and 13-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tanaka, and further in view of Blake et al. (USP 5,400,385). Claims 18-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tanaka, and further in view of Blake et al. Claims 2-4 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yamada et al., and further in view of Blake et al. Claims 11 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tanaka.

Claims 1 and 8-10 stand rejected under 35 U.S.C. §102(b). Applicant believes the rejection to be moot in light of the amendments set forth above. Specifically, with respect to claim 1, Tanaka fails to teach or suggest "a stationary inverter to provide AC power to [a] slip ring for transference to [a] HV tank" wherein "the stationary inverter includes a number of power switches arranged in an H-bridge configuration, the configuration having a pair of outputs such that at least one output is connected to a resonant circuit." The amendments to claim 1 incorporate the subject matter originally presented in claim 2, which was identified by the Examiner as not being taught or disclosed by Tanaka.

With respect to claim 8, Tanaka fails to teach or suggest a "power conditioner having an inverter connected to a series-resonant circuit that is connected to [a] slip ring." Moreover, claim 8 has been amended to incorporate subject matter that was originally presented in claim 13 which the Examiner acknowledged was taught by Tanaka.

In light of the above amendments to claims 1 and 8, Applicant requests withdrawal of the rejection of claims 1 and 8-10 as being anticipated by Tanaka.

The Examiner then rejected claims 1, 8-10, 18, 19, and 21-24 under 35 U.S.C. §102(b) as being anticipated by Yamada et al. Before responding to the rejection, Applicant reminds the Examiner that MPEP §904.03 states that "[t]he examiner is not called upon to cite *all* references that may be available, but only the 'best'" because "[m]ultiplying references [or combinations of references], any one of which is as good as,

but no better than, the others, adds to the burden and cost of prosecution and should therefore be avoided." In short, the Examiner is to apply the best reference as duplicative references "adds to the burden and cost of prosecution". Notwithstanding the charge of MPEP §904.03, the Examiner rejected claims 1 and 8-10 for the same statutory grounds that the claims were previously rejected. Similar to Tanaka, Yamada et al. fails to teach or suggest that which is called for in amended claims 1 and 8. More particularly, both claims have been amended to incorporate subject matter that the Examiner acknowledged as not being taught or described by Yamada et al. Accordingly, it is believed that the rejection of claims 1 and 8 under 35 U.S.C. §102(b) is moot.

In the rejection of claim 18 the Examiner concluded that Yamada et al. disclosed "a stationary base having an inverter (3) to supply AC power to the slip ring for transference to the HV tank; and the inverter having at least one resonant circuit (2, an LC circuit) connected to the slip ring." Office Action, January 11, 2005, p. 3. The reference, however, makes no such teaching.

Claim 18 calls for, in part, an "inverter having at least one resonant circuit connected to [a] slip ring." That is, the resonant circuit of the inverter, not simply an inverter output, is connected to a slip ring. This is a distinction that the Examiner has apparently overlooked as Yamada et al. clearly teaches in Fig. 1 thereof a smoothing circuit (2) that is connected to an inverter (3) and not connected to a slip ring (6). Moreover, Yamada et al. states that "[t]he rectified current is passed through the smoothing circuit 2 to obtain a direct current, which is then converted into an alternate current by the inverter 3." Yamada et al., col. 2, ll. 20-24. Clearly, the inverter comes *after* the smoothing circuit, which the Examiner considered equivalent to the claimed resonant circuit. Yamada et al. continues "[t]he output voltage from the inverter 3 is fed to a pair of slip rings 6 via a pair of brushes 61." Yamada et al., col. 2, ll. 40-41. Thus, it is readily apparent in Fig. 1 of the cited reference, as well as the text, that Yamada et al. neither teaches nor suggests an "inverter having at least one resonant circuit connected to [a] slip ring" as called for in claim 18. Therefore, Applicant requests withdrawal of the Examiner's rejection and allowance of claim 18.

The Examiner then rejected claims 2-7 and 13-24 under 35 U.S.C. §103(a) as being unpatentable over Tanaka in view of Blake et al. Thereafter, the Examiner rejected claims 2-4 under 35 U.S.C. §103(a) as being unpatentable over Yamada et al.

in view of Blake et al. Claims 11 and 12 were rejected §103(a) as being unpatentable over Tanaka.

Before responding to the Examiner's rejections, the Examiner is again reminded that MPEP §904.03 prohibits the type of duplicative rejections made in the present application. Just as the Examiner made duplicative §102 rejections, the Examiner has also made duplicative §103 rejections. The Examiner's efforts have not furthered prosecution but have only served to increase the burden placed on Applicant and, as a result, the Office.

As set forth above, claims 1 and 8 have been amended to incorporate the subject matter previously presented in claims 2 and 13, respectively. As such, to expedite prosecution, Applicant will respond to the Examiner's §103 rejections insofar as they pertain to the subject matter originally presented in claims 2 and 13.

In the rejection of claim 2, the Examiner acknowledged that Tanaka fails "to teach that the stationary inverter includes a number of power switches in an H-bridge configuration, the configuration having a pair of outputs such that at least one is connected to a resonant circuit." Office Action, *supra*, at p. 4. As such, the Examiner relied upon Blake et al. and concluded that it would have been obvious to combine the teachings of the references because "Blake et al. disclosed a common-type inverter circuit (46), which includes a number of power switches (UL, UR, LL, LR) in an H-bridge configuration, the configuration having a pair of outputs such that at least one output is connected to a resonant circuit (a LC circuit that includes inductor 47 and capacitor 49)." *Id.* According to the Examiner, "[i]t would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ an inverter disclosed by Blake et al., since a person would be motivated to employ a circuit that is proven by its wide use." *Id.* As will be set forth in detail below, the Examiner has failed to show that one skilled in the art would be motivated to combine the references in a manner suggested by the Examiner, that there is a reasonable expectation of success in arriving at the claimed invention of the combination and that the references, when combined, disclose each and every element of the claimed invention.

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *See* MPEP §2142. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore*

Hospital, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case of obviousness, the Examiner must not only show that the combination includes each and every element of the claimed invention, but also provide "a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). That is, "[o]bviousness can *only* be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art." MPEP §2143.01, emphasis added. "The fact that references can be combined or modified is not sufficient to establish *prima facie* obviousness." *Id.* When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *See Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988).

MPEP §2143 requires that to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success in arriving at the claimed invention from the cited references. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Not only has the Examiner failed to establish each of these criteria, but the references themselves do not support the Examiner's conclusions. Applicant believes that a *prima facie* case of obviousness has not been made, and cannot be made, based on the art of record because (1) there is no motivation to combine the references in the way done so by the Examiner, other than Applicant's own teaching; (2) the suggested combination does not have a reasonable expectation of success, at least to what is presently claimed; and (3) all the elements of the present claims are not present in the references. In short, the Examiner has not established the three basic criteria required under MPEP §2143.

The motivation to combine the references in the manner done so by the Examiner is not supported by the references, but was gleamed from the teachings of the present application. Tanaka is directed to an x-ray tube apparatus with protective resistors whereby a line voltage is input to a transformer that increases the voltage to an intermediate voltage that is fed to a slip ring whereupon the intermediate voltage is increased to a level sufficient to drive an x-ray tube through a pair of voltage multipliers. *See* Tanaka, col. 3, ll. 44-68 – col. 4, ll. 1-4, Fig. 3. Tanaka states that its system advantageously reduces the heat load on the slip ring by utilizing transference of an intermediate voltage from the transformer assembly to the voltage multipliers. *See* col. 6, ll. 25-42. In this regard, the insulation typically required for the slip ring is avoided as the voltage multipliers which rotate with the x-ray tube multiply the intermediate voltage to a level sufficient to drive the x-ray tube. *Id.*

Not only is Blake et al. silent as to a slip ring or a desire to reduce the thermal load of a slip ring, but Blake et al. also teaches direct application of a line voltage to a voltage multiplier that increases the received input to a high voltage, e.g. voltage at a level sufficient to drive an x-ray tube. Blake et al., col. 3, ll. 60-64. As shown in Fig. 2 of Blake et al., the output of the voltage multipliers is input directly to the x-ray tube. While Blake et al. does not teach that the input to the voltage multipliers is made across a slip ring; nevertheless, Blake et al. makes no teaching or suggestion of an intermediate voltage. Given that Tanaka explicitly teaches away from a system absent an intermediate voltage and that Blake et al. teaches only an input voltage and an x-ray tube voltage, one skilled in the art would not be motivated to combine the references in the manner as suggested by the Examiner. Applying hindsight it would seem that the LC circuit of Blake et al. could be easily integrated into the circuit of Tanaka; however, hindsight is impermissible when determining that an invention is obvious. The suggestion to combine must come from the references themselves. In the present case, such a suggestion is missing.

The Examiner has also failed to show a reasonable expectation of success in arriving at the claimed invention based on the references combined. That is, not only has the Examiner failed to provide the requisite showing of motivation, but one skilled in the art would readily recognize that by simply combining the references in the manner suggested by the Examiner would not provide a reasonable predictability in arriving at the invention called for in the claims. The prior art references relied upon by the

Examiner are concerned with reducing the thermal load of a slip ring (Tanaka) and improving the response of an inverter such that an actual voltage applied to an x-ray tube matches a desired voltage (Blake et al.). One reference is concerned with the slip ring of a CT system and the other reference is completely silent on the presence of a slip ring. Accordingly, the references provide no predictability that their combination would reasonably lead to the claimed invention. As such, the Examiner has failed to satisfy the second prong of the *prima facie* case for obviousness.

Further, the references fail to teach each and every element of the claimed invention. That is, neither references teaches a stationary inverter that has a number of power switches arranged in an H-bridge configuration and wherein the configuration has a pair of outputs such that at least one output is connected to a resonant circuit that is connected to a slip ring. Blake et al. teaches an LC circuit connected to a voltage multiplier. Tanaka teaches an inverter whose output is connected to a transformer that is directly connected to a slip ring. Moreover, the transformer cannot be considered a voltage multiplier as Tanaka clearly distinguishes between transformers and voltage multipliers. *See* Tanaka, *supra*, Fig. 3. As such, neither reference teaches that which is called for in claim 1, as amended.

The Examiner also rejected claim 13 under 35 U.S.C. §103 in light of Tanaka and Blake et al. The subject matter of claim 13 has been incorporated into claim 8. As amended, claim 8 calls for, in part, a power conditioner having an inverter connected to a series-resonant circuit that is connected to a slip ring. As set forth above, not only has the Examiner failed to show a motivation to combine the references or that one skilled in the art would have appreciated a reasonable expectation of success in arriving at the claimed invention, Tanaka and Blake et al. also fail to disclose, singly or in combination, "a power conditioner having an inverter connected to a series-resonant circuit that is connected to a slip ring". Blake et al. teaches an LC circuit connected to a voltage multiplier. Tanaka teaches an inverter whose output is connected to a transformer that is directly connected to a slip ring. As such, neither reference teaches that which is called for in amended claim 8.

Therefore, it is believed that claims 1 and 8, as amended herein, are patentably distinct from that taught and suggested by Tanaka and/or Blake et al.

The Examiner also rejected claim 2 as being unpatentable over Yamada et al. in view of Blake et al. As set forth above, Yamada et al. neither teaches nor suggests an

inverter having an output connected to a resonant circuit. As shown in Fig. 1 of Yamada et al., the reference discloses a rectifier whose output is fed to a smoothing circuit. The output of the smoothing circuit is then input to an inverter. The output of the inverter is fed to a slip ring. Therefore, notwithstanding a lack of motivation to combine Yamada et al. and Blake et al. as well as a lack of reasonable expectation of success in arriving at the claimed invention, the combination of references fails to teach or suggest each and every element called for in claim 1, as amended to incorporate the subject matter of claim 2. As such, that which is called for in claim 1, as amended, is neither taught nor suggested by Yamada et al. and/or Blake et al.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1, 3-12, and 14-24.

Applicant appreciates the Examiner's indication that the remarks presented December 16, 2004 were found persuasive. Applicant also appreciates the indication that the objections to the drawings have been withdrawn.

Applicant likewise appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

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Dated: February 7, 2005
Attorney Docket No.: GEMS8081.173

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